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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,473	09/06/2001	Anthony Richard Bonaccio	BUR920010063	4175

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EXAMINER

LUU, AN T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,473

Applicant(s)

BONACCIO ET AL.

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's Amendment filed on 12-16-02 has been received and entered in the case. Claim 7 is amended and claims 35-42 are added. The rejections set forth in the previous Office Action are maintained as indicated below.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by the Matsumoto et al reference (U. S. Patent 5,448,188).

Matsumoto discloses in figure 1 an apparatus to carry out methods of generating a clock signal on an IC (col. 1), the method comprising steps of generating a *differential* sinusoidal signal pair comprising of a first sinusoidal signal V1 and a second sinusoidal signal V2; and generating a clock signal Vout from the differential pair for the IC by employing both the first and second sinusoidal signals to form the clock signal as required by claims 1 and 31.

As to claim 2, transistors Q1 and Q2 form a differential amplifier.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 2816

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Wissell et al reference (U.S. Patent 6,184,736) in view of the Matsumoto et al reference (U. S. Patent 5,448,188).

Wissell discloses in figure 2 an apparatus comprising a generating circuit 42 for generating a differential signal pair (42a and 42b); a distribution circuit (blocks 48 and lines 24) coupled to the generating circuit to distribute the differential signal pair on the IC; a plurality of clock receiver circuits (receiver circuit 32) coupled to the distribution circuit as partially required by claim 13. Wissell does not disclose the receiver circuit to output a single local clock signal as recited in claim. Matsumoto discloses in figure 1 a receiver circuit for producing a single clock output signal by employing both of the sinusoidal signal pair (details description is noted in paragraph 4 above). It would have been obvious to one skilled in the art at the time the invention was made to incorporate the teaching of Matsumoto into that of Wissell because a receiver circuit can be implemented in many different ways to accommodate the requirement of particular application. A skilled artisan in the art would have been motivated to combine these references to produce a stabilized clock output signal by mixing corresponding of a plurality of input signals.

As to claim 20, transistors Q1 and Q2, fig.1 of Matsumoto, form a differential amplifier.

As to claim 21, element 34 is for tuning frequency of the distribution circuit.

As to claim 22, the scope of this claim is similar to that of claim 13. Therefore, it is rejected for the same reason set forth above.

As to claim 23, it is obvious that the local clock signal Vout can be used for more than one application simultaneously.

Art Unit: 2816

As to claim 30, the scope of this claim is similar to that of claim 20. Therefore, it is rejected for the same reason set forth above.

As to claims 14-19 and 24-29, Wissell discloses all the claimed invention recited in claims except for having the specific values for peak-to-peak amplitudes of the local and sinusoidal clock signals. It would have been obvious to one skilled in the art at the time the invention was made to select a particular value of the amplitudes since it has been held that where the general conditions of claims are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

As to claim 6, it is well known in the art that routing track are formed side by side so that transmitting signals have the same travel distances (i.e., H- or TREE- distribution network).

As to claims 1-5 and 7-12, they are rejected for reciting methods and/or steps derived from the apparatus rejected in claims 13-30 noted above.

As to claim 32, the scope of this claim is similar to that of claim 8. Therefore, it is rejected for the same reason set forth above.

As to claims 33 and 34, the scopes of these claims are similar to those of claims 13 and 22. Therefore, they are rejected for the same reasons set forth above.

5. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Matsumoto et al reference (U. S. Patent 5,448,188) in view of Tran et al (U.S. Patent 5,157,277).

Matsumoto discloses all the claimed invention except for having a square wave signal at his output. Tran discloses in figure 1 an apparatus/method for converting a sine wave signal (IN) into a square wave signal (OUT). It would have been obvious to one skilled in the art to improve

Art Unit: 2816

Matsumoto's teaching by incorporate the teaching of Tran into Matsumoto's invention to achieve a square signal so that a wider range of application can be utilized. A skilled artisan in the art would have been motivated to combine those teachings so that Matsumoto's invention can be used in both analog and digital environments.

6. Claims 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Wissell et al reference (U.S. Patent 6,184,736) in view of the Matsumoto et al reference (U. S. Patent 5,448,188) and further in view of Tran et al (U.S. Patent 5,157,277).

The recitations of claims 36-42 are identical as that of claim 35. Therefore, they are rejected for the same reason set above.

Response to Arguments

7. Applicant's arguments filed 12-16-02 have been fully considered but they are not persuasive.

Applicant has amended and clarified term "clock gating" to overcome the rejection of claim 7 under 35 USC 112, second paragraph.

Regarding to the rejection of claims under 35 USC 102 and 35 USC 103, Applicant has argued that Matsumoto does not disclose "a clock signal" and concluded that claims are not anticipated by Matsumoto under 35 USC 102 rejection and the rejection under 35 USC 103 (combination of Matsumoto and Wissell) are flawed because there is no "clock signal" in Matsumoto as mention above. Examiner respectfully disagrees with Applicant's argument for the following reason. Matsumoto does not explicitly use term "clock signal" in his disclosure.

Art Unit: 2816

However, the output of his circuit (Vout of figure 1) is clearly shown to be a clock signal. It is known in the art that a sine wave signal can be used as a clock signal (col. 2, lines 52-55 of U.S. Patent 5,157,277 cited on IDS filed on 9-17-01).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

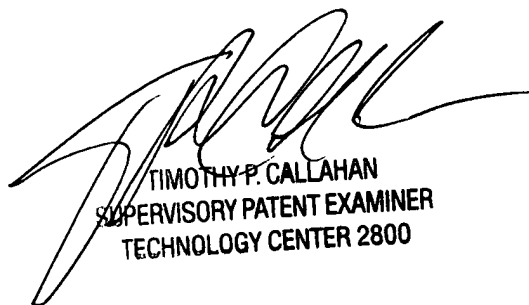
Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 703-308-4922. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Art Unit: 2816

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

An T.Luu
March 13, 2003



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800